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ABSTRACT

One outcome area in the Southwest Regional Laboratory (SWRL) Spelling Program is the use of sources (e.g. a dictionary) to determine the correct spelling of words having unpredictable but common sound-to-spelling correspondences. This paper describes the dictionary-source instruction used in commercially available spelling series and the materials used for such instruction. Dictionary skills required to attain the SWRL Spelling Program outcome are derived from this description. The sequence of these skills in levels 1-16 of the SWRL Spelling Program is presented. (Author)

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Bruce Cronnell and Susan Becher

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One outcome area in the SWRL Spelling Program is the use of sources (e.g., a dictionary) to determine the correct spelling of words having unpredictable but common sound-to-spelling correspondences. This paper describes the dictionary-source instruction used in commercially available spelling series and the materials used for such instruction. Dictionary skills required to attain the SWRL Spelling Program outcome are derived from this description. The sequence of these skills in Levels 1-16 of the Spelling Program is presented.

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DESIGN OF DICTIONARY-SOURCE INSTRUCTION FOR LEVELS 1-16 OF THE SWRL SPELLING PROGRAM

Bruce Cronnell and Susan Becher

English sound-to-spelling correspondences are marked by a great deal of consistency (Hanna, Hanna, Hodges, & Rudorf, 1966). The SWRL Spelling Program is based on the assumption that because of this consistency, correspondences can be taught to children and that their use will facilitate the correct spelling of words not explicitly taught in the Program. However, not all of the correspondences show perfect relations between sound and spelling; such correspondences require differential kinds of instructional treatment. Venezky (1969) has indicated three types of correspondences:

1) Predictable: These can be correctly transferred to new words, although environmental constraints may need to be considered.
2) Unpredictable but common: While these correspondences occur in large groups of words, their correct use cannot be determined on the basis of sound or environment.
3) Unpredictable and rare: These correspondences occur only in a few words and cannot be determined by sound or environment.

The first category of predictable correspondences should cause few difficulties (so long as environmental constraints are learned where necessary). The third category, words containing unpredictable and rare correspondences, must be marked as "sight words" and be memorized by the student. It is the second category, unpredictable but common correspondences, which can cause the greatest problems, since the words are both numerous and in common use.

One way of learning words with such correspondences is to memorize them, relating spelling to meaning; for testing purposes, this is undoubtedly

necessary. (Note, however, that the whole word need not be memorized, only that part which is unpredictable; e.g., in spelling pale and pail, the p and l are predictable and should not cause difficulty.) Much more efficient and practical than memorizing all such words is to use sources (e.g., a dictionary) to determine the correct spelling of words with unpredictable correspondences. This use of sources is one of the outcome areas of the SWRL Spelling Program (Cronnell, 1972a) and this paper describes the content of instruction leading to mastery of the outcome in Levels 1-16. Future work will describe dictionary-source instruction for later levels of the Program.

REVIEW OF DICTIONARY-SOURCE SKILLS

Before specifying the content of dictionary-source instruction for the SWRL Spelling Program, a review was made of such instruction in four currently used spelling series: Scott, Foresman (Monroe, Aaron, & Schiller, 1969), which provides extensive dictionary-source materials; McGraw-Hill (Kottmeyer & Claus, 1968), which is very widely used and is the California state-adopted text; SRA (Day & Lightbody, 1970), which has a good linguistic base; and Houghton Mifflin (Hanna & Hanna, 1967), which is by the authors of the main study of English sound-to-spelling correspondences (Hanna et al., 1966). (The first three of these series are reviewed in Cronnell, 1971.) Table 1 lists the dictionary-source skills taught in these series and the grade levels at which they are introduced.

The skills can be organized into five main categories: (1) location, (2) spelling, (3) pronunciation symbolization, (4) entry form characterization, and (5) meaning. The skills under (4) and (5) are primarily concerned with use of a dictionary for better word knowledge. While these are valuable

TABLE 1

SUMMARY OF DICTIONARY-SOURCE SKILLS IN COMMON USE

Skill	Grade level of introduction			
	Scott, Foresman	McGraw-Hill	SRA*	Houghton Mifflin
1. Location skills				
knowing the alphabet in order	1	1-2	2	2
alphabetizing words by the first, second, or third letter	1	1-2	2	2
using guide words	4	4	4	3
2. Spelling skills				
dividing words by dictionary syllables	3	3	2	2
proofreading	2	2	-	2
using a reference guide	3	-	-	-
3. Pronunciation symbolization skills				
using pronunciation symbols	4	4	2	2-3
using a pronunciation key	3	3-4	2	2-3
using key words	-	4	-	-
4. Entry form characterization skills				
numbered entries listed separately for different meanings and uses	3	4	-	3
only base forms listed	-	4	-	-
common abbreviations listed separately	-	4	-	-
contractions listed	-	4	-	-
special phrases listed	-	4	-	-
some irregular inflected forms given	-	4	-	-
capitalization indicated	-	4	-	-
5. Meaning skills				
parts of speech abbreviations	3	4	-	4
different meanings for one word	4	4	4	4
meaning within a sentence context	4	4	4	4
synonyms and antonyms	-	-	-	4

*SRA does not begin until second grade.

skills, they do not pertain directly to the spelling of words with unpredictable but common correspondences and thus will not be considered in this paper. The first three skill types are of importance to spelling instruction, either as requisite skills for dictionary-source work or as part of the outcomes for the SWRL Spelling Program.

Location Skills

Location skills are clearly important prerequisites for the use of alphabetized word lists. They include a range of skills from knowing the sequence of the alphabet through arranging words alphabetically by the first, second, third, etc. letter and locating a word in such a list using guide words. Spelling series which include this type of instruction are frequently supplemented by beginning dictionaries (Scott, Foresman) or word lists at the back of the individual books (McGraw-Hill and Houghton Mifflin). Others assume the availability of personal copies of outside dictionaries (SRA). However, the basic alphabetization skills do not necessarily require outside sources, although guide-word instruction is most useful when applied to a source which employs them.

Spelling Skills

Syllabification is an area of great controversy, both with regard to its definition and to the manner and utility of instruction in it. Groff (1971) presents the basis of the debate between linguists and educationists, but is able to draw very few conclusions outside of rejecting dictionary syllabification as an aid to teaching spelling. The ways in which the various series handle these two areas reveal the kinds of definitions they are using. Houghton Mifflin defines the syllable as being composed of one vowel and optional consonants; this, of course, omits diphthongs and syllabic

consonants. An accent mark is said to indicate the most important syllable in the word. The concept of stress is introduced later. SRA emphasizes the fact that every syllable has one vowel or vowel-like sound which may be spelled with one or more letters. Simple exercises in listening for the "beat" of the syllables are suggested. A teacher's note admits that determining syllable boundaries is difficult, if not impossible, and seems to indicate a move away from the emphasis placed upon dictionary syllabification. The unit on stress also emphasizes the importance of sound and practice in explicating the concept. McGraw-Hill uses compounds and prefixes to introduce the concept of syllabification. There is no attempt at a definition of either stress or the syllable. The introduction is followed by units with rules on dictionary syllabification. Scott, Foresman treats neither syllabification nor stress formally, merely presenting polysyllabic words, first in the reference materials and then in the lessons. Because of the difficulty in defining the syllable and the lack of evidence for its usefulness in instruction, syllabification will not be explicitly treated in the SWRL Spelling Program.

An additional skill in the spelling category is proofreading. Although the study presented in Personke and Yee (1971) was conducted with sixth grade students, the results seem to indicate that proofreading skills (including many dictionary skills) should be emphasized from the beginning of a spelling program. The SWRL Spelling Program will include proofreading by emphasizing the need for pupils to check their spelling in both exercises and tests. Some exercises will explicitly involve proofreading skills by asking students to correct misspellings (Butler, 1972).

The reference guide used by Scott, Foresman lists English sounds and their spellings, along with comments and word lists for each spelling.

Thus, when students are in doubt about the spelling of a sound in a particular word, they may consult this reference guide. Use of such a source seems to be an appropriate step toward dictionary use, but with emphasis on spelling only.

Pronunciation Symbolization Skills

Pronunciation symbolization skills provide students with a symbolization system related directly to pronunciation and useful for finding and verifying spellings. The SWRL Spelling Program will use the pronunciation symbols defined by Cronnell (1972b). The specified symbols are linguistically valid and based on a review of those commonly used in textbooks and dictionaries. To use the symbols, students will need to become familiar with the use of a pronunciation key. To avoid student dependence upon a particular pronunciation key or set of key words, some authorities (e.g., Lamb, 1964) recommend that a selection of dictionaries be available to the student, if only in single copies. A few spelling series present a key within their books (Scott, Foresman); some use such symbols only in the supplementary word lists at the back of the book (Houghton Mifflin), while others restrict all references to pronunciation to those like "long a sound" (McGraw-Hill). The use of key words as an aid in deciphering pronunciation symbols is presented in only one series (McGraw-Hill).

Review of current spelling instruction indicated several dictionary-source skills for Levels 1-16 of the SWRL Spelling Program. The location skills of alphabetization and use of guide words will be included. Since syllabification appears to be of little value, it will not be included; proofreading will be emphasized throughout the program. The remaining skill component, "using a reference guide," will be included in the program along

with the reference guide described below. In addition, pronunciation symbolization skills will be taught.

MATERIALS FOR DICTIONARY-SOURCE INSTRUCTION

There are several different kinds of materials which may be used in dictionary-source instruction. The simplest are the student written exercises, which seem appropriate and sufficient for some of the more basic skills like alphabetization. For more advanced skills, additional materials are needed.

The most obvious outside source is a dictionary. However, Levels 1-16 of the SWRL Spelling Program are expected to be used approximately in grades K-3, while instruction in dictionary use generally begins in fourth grade. While earlier instruction might be valuable, use of the SWRL Spelling Program may be limited if schools need to purchase dictionaries for third (and even second) graders to supplement it. Thus actual use of dictionaries for dictionary-source instruction will not be required, although it will be encouraged.

An alphabetized word list (similar to a dictionary, but without definitions, etc.) is more suitable for the SWRL Spelling Program. Such a word list will include words used in the Program, as well as additional useful words, especially ones with unpredictable but common correspondences. This word list will employ guide words, for which instruction will be given. Previous SWRL descriptive writing tryouts have employed word lists, but they are not planned for the K-3 Composition Skills Program currently being developed. However, there is no reason why pupils should not use their spelling word list for assistance in composition; in fact, such use will be encouraged.

The reference guide used in the Scott, Foresman program has been mentioned above (page 5): English sounds and their spellings are listed, along with comments and word lists for each spelling. A reasonable alternative, of less size but more emphasis on important spelling content, is a reference guide containing unpredictable but common correspondences and correspondences with which children seem to have particular difficulty (e.g., double consonants, cf. Schwab & Becher, 1972). Such a reference guide will be employed for dictionary-source instruction and will also be a useful aid for children at all times when they are spelling.

SEQUENCED DICTIONARY-SOURCE SKILLS FOR LEVELS 1-16 OF THE SWRL SPELLING PROGRAM

Review of dictionary-source instruction indicated that most of the skills of types (1)-(3) in Table 1 will be of value in the SWRL Spelling Program. In Table 2, these skills are sequenced from knowing the alphabet in order to finding the spellings of homophones (this latter skill, only, involving meaning). The sequence is based on organization of requisite skills (alphabetization by the first letter of a word before alphabetization by the second) and on difficulty (Skill 10, where only one spelling is correct, should be easier than Skill 11 with homophones, where more than one spelling is possible).

The primary materials to be used will be the student written exercises; additional materials are listed in Table 2. In general, each skill will be treated in only part of a unit; however, for Skills 7 and 10 a full unit will be devoted to their introduction, including review of previous relevant skills. For Skills 1-5 and 11, the exercises will be brief. For Skills 7-10, student written exercises will give directions to make use of outside sources, although introductory exercises for Skills 8 and 9 may be self-contained.

A separate reference guide will be included for use by pupils at Levels 8-11; this guide should also be of use for pupils at later levels, although not required for instruction. Sounds for which the correspondences are common but unpredictable or are difficult for children will be included. For each correspondence, notes, if needed (e.g., indicating environment), will be included followed by a large but not exhaustive sample of words exemplifying the correspondence. A limited amount of space will be provided for pupils to add words of their own. For Levels 12-16, a spelling summary will be included in the student materials; it will briefly (in about two pages) present the reference guide information, but with only one example per correspondence, to provide pupils with spelling information which can aid them in looking up the correct spellings of words in the word list (or dictionary). The correspondence content for the reference guide and spelling summary is listed in the appendix, based on Berdiansky (1971), Becher and Schwab (1972), Schwab (1972), and Schwab and Becher (1972).

TABLE 2

SEQUENCE OF DICTIONARY-SOURCE SKILLS FOR LEVELS 1-16
OF THE SWRL SPELLING PROGRAM

Skill	Level	No. of Units Per Level	Additional Materials
1. Know the alphabet in order	3	1*	---
2. Alphabetize and locate letters	4	2**	---
	5	1 (Before Skill 3)	
3. Alphabetize and locate words by the first letter	5	2**	---
	6	1 (Before Skill 4)	
4. Alphabetize and locate words by the second letter	6	2**	---
	7	1 (Before Skill 5)	
5. Alphabetize and locate words by the third letter	7	2**	---
	8	1	
6. Alphabetize and locate words by the fourth letter	7	1-2	---
	8	1	
7. Use a reference guide to find the spellings of words	8	2**	Reference guide
	9	2**	
	10	2**	
	11	1	
8. Use pronunciation symbols	9	1	Reference guide
	10	2**	
	11	1 (or 2)	
9. Use guide words	12	1	Word list
	13	1*	(optional: dictionary
10. Use word list to find spellings of words with unpredictable but common spellings (not homophones)	12	2**	Word list
	13	1*	(optional: dictionary
	14	2**	
	15	1*	
	16	1*	
11. Find spellings of homophones (by use of meaning)	15	1*	(optional: dictionary)
	16	1*	

*Test skill
**Test skill in second unit

APPENDIX

CONTENT FOR THE REFERENCE GUIDE AND SPELLING SUMMARY

Unpredictable but Common Correspondences

Simple consonants	Example
/s/ → s	sit
ce/C__	dance
c/V_e	face
(se/V̄V__#	blouse)
(se/C__#	rinse)
(c/#_	cell)
/z/ → z	zoo
s/V_e#	nose
(s/V̄_V	closet)
(se/V̄V__#	bruise)
(/f/ → f	fit)
(ph	pheasant)
(/ø/ → gh	plough)
(/r/ → r	rat)
(wr	wreath)

Vowels	
/ɛ/ → e	red
ea	bread
/ə/ → u	up
o, o...e	won, done
/ʊ/ → u	push
oo	book
/i/ → e/_#	be
ee	beet
ea	beat
y/_#	funny
(ei	sei-e)
(ie	brief)
(i	ski)
(ey/__#	honey)

Note: Correspondences in parentheses, not used until Level 12 or later, will not be included in the reference guide but will be included in the spelling summary.

Vowels (con't)	Example
/e/ → a...e	pale
ai	pail
/o/ → o/_#	go
o...e	rode
oa	road
ow/__(n)#	grow, grown
/(y)u/ → u...e	rule
oo	room
ue/__#	blue
ew/__#	blew
/ay/ → i...e	bite
y/_#	try
igh	light
ie/__#	die
igh/___#	high
/ɔ/ → o	long
a/_ll	all
au	haul
aw	crawl
(ou	thought)

Vowels plus "r"

/ər/ (stressed) → er	her
ir	bird
ur	hurt
(ear	search)
/ər/ (unstressed) → er	father
or	doctor
(ar	collar)

Unstressed vowels

/ən/ → en	happen
on	button
(in	cabin)
(/ənt/ → ent	silent)
ant	instant)

Unstressed vowels (con't)	Example
/əl/ → le/__#	bottle
al/__#	animal
el/__#	barrel
/ə/ → a (syllable final)	pyramid
i (syllable final)	pelican
e (syllable final)	appetite
o (syllable final)	daffodil
/əC/ → aCe/___#	palace
iCe/___#	favorite

Difficult Correspondences on Basis of Schwab and Becher (1972)

Rule	Example
/ɵ/ → ay	tray
*/ər/ → ir	thirsty
*/ər/ → ur	curb
/ǰ/ → dge/V__#	judge
*/ər/ → or/__#	tractor
*/ay/ → igh	tight
*/ɔ/ → au	haul
*/ɔ/ → aw	thaw
*/(y)u/ → ue	fuel
*/(y)u/ → ew	flew
/f/ → ff/__#	cliff
possessives	pig's
contractions	how's
base + C + suffix	canned
y → i + -es, -ed	bunnies

*also on unpredictable but common list

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